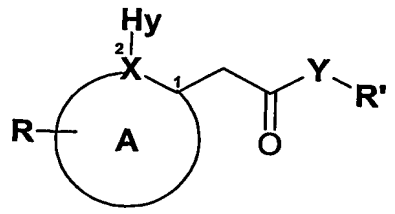
CLAIMS

1. Use of 2-arylacetic acid compounds and derivatives of formula (I):



(I)

and pharmaceutically acceptable salts thereof,

wherein

A includes the X atom and represents a 5-6 membered aromatic or heteroaromatic ring optionally including a heteroatom, or a further heteroatom when X is N, selected from N (nitrogen), O (oxygen), S (sulfur); the 5-6 membered aromatic or heteroaromatic ring is optionally fused with a second ring to give bicyclic aromatic or heteroaromatic structures;

labels 1 and 2 mark the relevant positions on the A ring;

the X atom is selected from N (nitrogen) and C (carbon);

R is a substituting group on the A ring selected from:

- a group in the 3 (meta) position selected from a linear or branched C_1-C_5 alkyl, C_2 C_5-alkenyl or C_2-C_5-alkynyl group, substituted or not-substituted phenyl, linear or branched C_1-C_5 hydroxyalkyl, C_2-C_5-acyl, substituted or not-substituted benzoyl;
- a group in the 4 (para) position selected from C_1-C_5 alkyl, C_2-C_5-alkenyl or C_2-C_5-alkynyl group, C_3-C_6-cycloalkyl, C_1-C_5-acyloxy, substituted or not-substituted benzoyloxy, C_1-C_5-acylamino, substituted or not-substituted benzoylamino, C_1-C_5-sulfonyloxy, substituted or not-substituted benzenesulfonyloxy, C_1-C_5-alkanesulfonylamino, substituted or not-substituted benzenesulfonylamino, C_1-C_5-alkanesulfonylmethyl, substituted or not-substituted benzenesulfonylmethyl, 2-furyl; 3-tetrahydrofuryl; 2 thiophenyl; 2-tetrahydrothiophenyl groups or a C_1-C_8-alkanoyl, cycloalkanoyl or arylalkanoyl-C_1-C_5-alkylamino group;

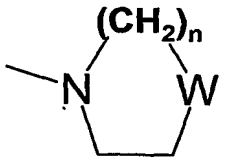
Hy is a small hydrophobic group with a steric hindrance factor ν ranging between 0.5 and 0.9 Å (where ν is the Charton steric constant for substituents), including methyl, ethyl, chlorine, bromine, methoxy, trifluoromethyl;

The Y group is selected from O (oxygen) and NH;

when Y is O (oxygen), R' is H (hydrogen);

When Y is NH, R' is selected from

- H, C_1-C_5-alkyl, C_1-C_5-cycloalkyl, C_1-C_5-alkenyl;
- an amino acid residue consisting of straight or branched C_1-C_6-alkyl, C_1-C_6-cycloalkyl, C_1-C_6-alkenyl, phenylalkyl substituted with one or more carboxy (COOH) groups;
- an amino acid residue consisting of straight or branched C_1-C_6-alkyl, C_1-C_6-cycloalkyl, C_1-C_6-alkenyl, phenylalkyl, bearing along the chain a heteroatom selected from oxygen and sulfur and with one or more carboxy (COOH) groups;
- a residue of formula $-CH_2-CH_2-Z-(CH_2-CH_2O)nR''$ wherein R'' is H or C_1-C_5-alkyl, n is an integer from 0 to 2 and Z is oxygen or sulfur;
- a residue of formula $-(CH_2)n-NRaRb$ wherein n is an integer from 0 to 5 and each Ra and Rb, which may be the same or different, are C_1-C_6-alkyl, C_1-C_6-alkenyl or, alternatively, Ra and Rb, together with the nitrogen atom to which they are bound, form a heterocycle from 3 to 7 members of formula (II)



(II)

- wherein W represents a single bond, CH_2, O, S or N-Rc, wherein Rc is H, C_1-C_6-alkyl or C_1-C_6-alkylphenyl;
- a residue OR'' wherein R'' is H, methyl, carboxymethyl;

- a residue of formula SO_2Rd wherein Rd is C_1-C_6-alkyl, C_1-C_6-cycloalkyl, C_1-C_6-alkenyl;

in the preparation of a medicament for the inhibition of IL-8 induced human PMNs chemotaxis.

2. Use according to claim 1, wherein A is benzene, naphthalene, pyridine, pyrimidine, pyrrole, imidazole, furane, thiophene, indole and 7-aza-indole.

3. Use according to claim 1, wherein YR' is OH.

4. Use according to claim 1, wherein Y is NH and R' is:

- the amino acid residue of glycine, β-alanine, γ-aminobutyric acid or residues of an L-α-amino acid selected in the group of L-alanine, valine, leucine, isoleucine, nor-leucine, phenylalanine, S-methylcysteine, methionine;
- a residue of formula $-CH_2-CH_2-O-(CH_2-CH_2O)R''$ wherein R'' is H or C_1-C_5-alkyl;
- a residue of formula –(CH2)n-NRaRb wherein n is an integer from 2 to three, more preferably 3, and the group NRaRb is N,N-dimethylamine, N,N-diethylamine, 1-piperidyl, 4-morpholyl, 1-pyrrolidyl, 1-piperazinyl, 1-(4-methyl)piperazinyl;
- a residue OR'' wherein R'' is H, methyl;
- a residue of formula SO_2Rd wherein Rd is methyl, ethyl or isopropyl.

5. Use according to any of claims 1 to 4, wherein R is 3'-benzoyl, 3'-(4-chloro-benzoyl), 3'- (4-methyl-benzoyl), 3'-acetyl, 3'-propionyl, 3'-isobutanoyl, 3'-ethyl, 3'-isopropyl, 4'-isobutyl, 4'-trifluoromethanesulphonyloxy, 4'-benzenesulphonyloxy, 4'-trifluoromethanesulphonylamino, 4'-benzenesulphonylamino, 4'-benzenesulphonylmethyl, 4'-acetyloxy, 4'-propionyloxy, 4'-benzoyloxy, 4'acetylamino, 4'propionylamino, 4'-benzoylamino.

6. Use according to any of claims 1 to 5, wherein Hy is selected from methyl, ethyl, chlorine, bromine, methoxy, trifluoromethyl.

7. Use according to claim 1, wherein 2-arylacetic acid compounds and derivatives of formula (I) are selected from:

(3-benzoyl-2-methylphenyl)acetic acid

(2-chloro-3-propionylphenyl)acetic acid

(3-isopropyl-2-methylphenyl)acetic acid

(4-isobutyl-2-methylphenyl)acetic acid

{2-methyl-4-[(phenylsulphonyl)amino]phenyl}acetic acid

{2-methyl-4-[(trifluoromethanesulphonyl)amino]phenyl}acetic acid

{2-chloro-4-[(trifluoromethanesulphonyl)oxy]phenyl}acetic acid

(5-acetyl-1-methyl-1H-pyrrol-2-yl)acetic acid

[1-methyl-5-(4-methylbenzoyl)-1H-pyrrol-2-yl]acetic acid

(5-benzoyl-1-methyl-1H-pyrrol-2-yl)acetic acid

[1-methyl-5-(4-chlorobenzoyl)-1H-pyrrol-2-yl]acetic acid

(5-isobutyryl-1-methyl-1H-pyrrol-2-yl)acetic acid

(1-benzoyl-2-methyl-1H-pyrrol-3-yl)acetic acid

(1-benzoyl-2-chloro-1H-pyrrol-3-yl)acetic acid

(1-benzoyl-2-methyl-1H-indol-3-yl)acetic acid

[1-(4-chlorobenzoyl)-2-methyl-1H-indol-3-yl]acetic acid

(1-isopropyl-2-methyl-1H-pyrrole[2,3-b]pyridin-3-yl)acetic acid

(3-benzoyl-2-methoxyphenyl)acetic acid

(5-acetyl-1-methyl-1H-pyrrol-2-yl)acetamide

(5-acetyl-1-methyl-1H-pyrrol-2-yl)-N-carboxymethylacetamide

(S)(5-acetyl-1-methyl-1H-pyrrol-2-yl)-N-(2-carboxyethyl)acetamide

(5-acetyl-1-methyl-1H-pyrrol-2-yl)-N-(3-dimethylaminopropyl)acetamide

(S)(5-acetyl-1-methyl-1H-pyrrol-2-yl)-N-(1-carboxy-2-methoxyethyl)acetamide

(4-isobutyl-2-methylphenyl)acetamide

(2-chloro-3-propionylphenyl))-N-(3-dimethylaminoethyl)acetamide

(3-isopropyl-2-methylphenyl)-N-[3-(1-piperidinyl)propyl]acetamide

(3-benzoyl-2-methylphenyl)acetamide

(1-benzoyl-2-methyl-1H-indol-3-yl)acetamide

(1-benzoyl-2-methyl-1H-indol-3-yl)-N-(3-dimethylaminopropyl)acetamide

[1-(4-chlorobenzoyl)-2-methyl-1H-indol-3-yl]acetamide

[1-(4-chlorobenzoyl)-5-methoxy-2-methyl-1H-indol-3-yl]acetamide

{2-chloro-4-[(trifluoromethanesulphonyl)oxy]phenyl}-N-(2-hydroxyethoxyethyl)acetamide

(1-benzoyl-2-methyl-1H-pyrrol-3-yl)-N-(2-methoxyethyl)acetamide

(1-benzoyl-2-chloro-1H-pyrrol-3-yl)-N-[3-(1-morpholino)propyl]acetamide

(5-isobutyryl-1-methyl-1H-pyrrol-2-yl)acetamide

(5-benzoyl-1-methyl-1H-pyrrol-2-yl)-N-(2-carboxymethyl)acetamide

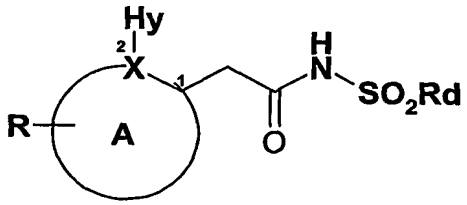
[1-methyl-5-(4-chlorobenzoyl)-1H-pyrrol-2-yl]-N-(2-hydroxyethoxyethyl)acetamide

[1-methyl-5-(4-chlorobenzoyl)-1H-pyrrol-2-yl]acetamide

{2-methyl-4-[(phenylsulphonyl)amino]phenyl}-N-(3-dimethylaminopropyl)acetamide

(3-benzoyl-2-methoxyphenyl)acetamide.

8. 2-Arylacetic acid compounds and derivatives of formula (Ia)



(Ia)

and pharmaceutically acceptable salts thereof,

wherein :

A includes the X atom and represents a 5-6 membered aromatic or heteroaromatic ring optionally including a heteroatom, or a further heteroatom when X is N, selected from N (nitrogen), O (oxygen), S (sulfur); the 5-6 membered aromatic or heteroaromatic ring is optionally fused with a second ring to give bicyclic aromatic or heteroaromatic structures;

labels 1 and 2 mark the relevant positions on the A ring;

the X atom is selected from N (nitrogen) and C (carbon);

R is a substituting group on the A ring selected from :

- a group in the 3 (meta) position selected from a linear or branched C_1-C_5 alkyl, C_2-C_5-alkenyl or C_2-C_5-alkynyl group, substituted or not-substituted phenyl, linear or branched C_1-C_5 hydroxyalkyl, C_2-C_5-acyl, substituted or not-substituted benzoyl;
- a group in the 4 (para) position selected from C_1-C_5 alkyl, C_2-C_5-alkenyl or C_2-C_5-alkynyl group, C_3-C_6-cycloalkyl, C_1-C_5-acyloxy, substituted or not-substituted benzoyloxy, C_1-C_5-acylamino, substituted or not-substituted

benzoylamino, C_1-C_5-sulfonyloxy, substituted or not-substituted benzenesulfonyloxy, C_1-C_5-alkanesulfonylamino, substituted or not-substituted benzenesulfonylamino, C_1-C_5-alkanesulfonylmethyl, substituted or not-substituted benzenesulfonylmethyl, 2-furyl; 3-tetrahydrofuryl; 2-thiophenyl; 2-tetrahydrothiophenyl groups or a C_1-C_8-alkanoyl, cycloalkanoyl or arylalkanoyl-C_1-C_5-alkylamino group;

Hy is a small hydrophobic group with a steric hindrance factor ν ranging between 0.5 and 0.9 Å (where ν is the Charton steric constant for substituents), including methyl, ethyl, chlorine, bromine, methoxy, trifluoromethyl;

Rd is C_1-C_6-alkyl, C_1-C_6-cycloalkyl, C_1-C_6-alkenyl.

9. Compounds according to claim 8, wherein

A is benzene, pyridine, pyrimidine, pyrrole, imidazole, furane, thiophene, indole;

Rd is methyl, ethyl or isopropyl;

Hy is selected from methyl, ethyl, chlorine, bromine, methoxy, trifluoromethyl.

10. Compounds according to claims 8 or 9, selected from

(5-acetyl-1-methyl-1H-pyrrol-2-yl)acetyl methanesulphonamide

(4-isobutyl-2-methylphenyl)acetyl methanesulphonamide

{2-methyl-4-[(trifluoromethanesulphonyl)amino]phenyl}acetyl methanesulphonamide

[1-methyl-5-(4-methylbenzoyl)-1H-pyrrol-2-yl]acetylmethanesulphonamide

11. Process for the preparation of compounds of formula (Ia) according to claim 8, comprising the transformation of a compound of formula (I), according to claim 1, wherein YR' is OH, in a reactive intermediate, such as an acyl chloride or a benzotriazolyl ester, and reacting with a compound of formula NH_2SO_2Rd, wherein Rd is C_1-C_6-alkyl, C_1-C_6-cycloalkyl, C_1-C_6-alkenyl, in the presence of a suitable base.

12. Pharmaceutical compositions comprising a compound according to any of claims 1 to 10 in admixture with a suitable carrier thereof.

13. Compounds according to any of claims 8 to 10 for use as medicaments.

14. Compounds according to claim 13 for use in the treatment of psoriasis, ulcerative colitis, melanoma, chronic obstructive pulmonary disease (COPD),

bullous pemphigoid, rheumatoid arthritis, idiopathic fibrosis, glomerulonephritis and in the prevention and treatment of damages caused by ischemia and reperfusion.

15. Use according to any of claims 1 to 7 in the preparation of a medicament for the treatment of psoriasis, ulcerative colitis, melanoma, chronic obstructive pulmonary disease (COPD), bullous pemphigoid, rheumatoid arthritis, idiopathic fibrosis, glomerulonephritis and in the prevention and treatment of damages caused by ischemia and reperfusion.